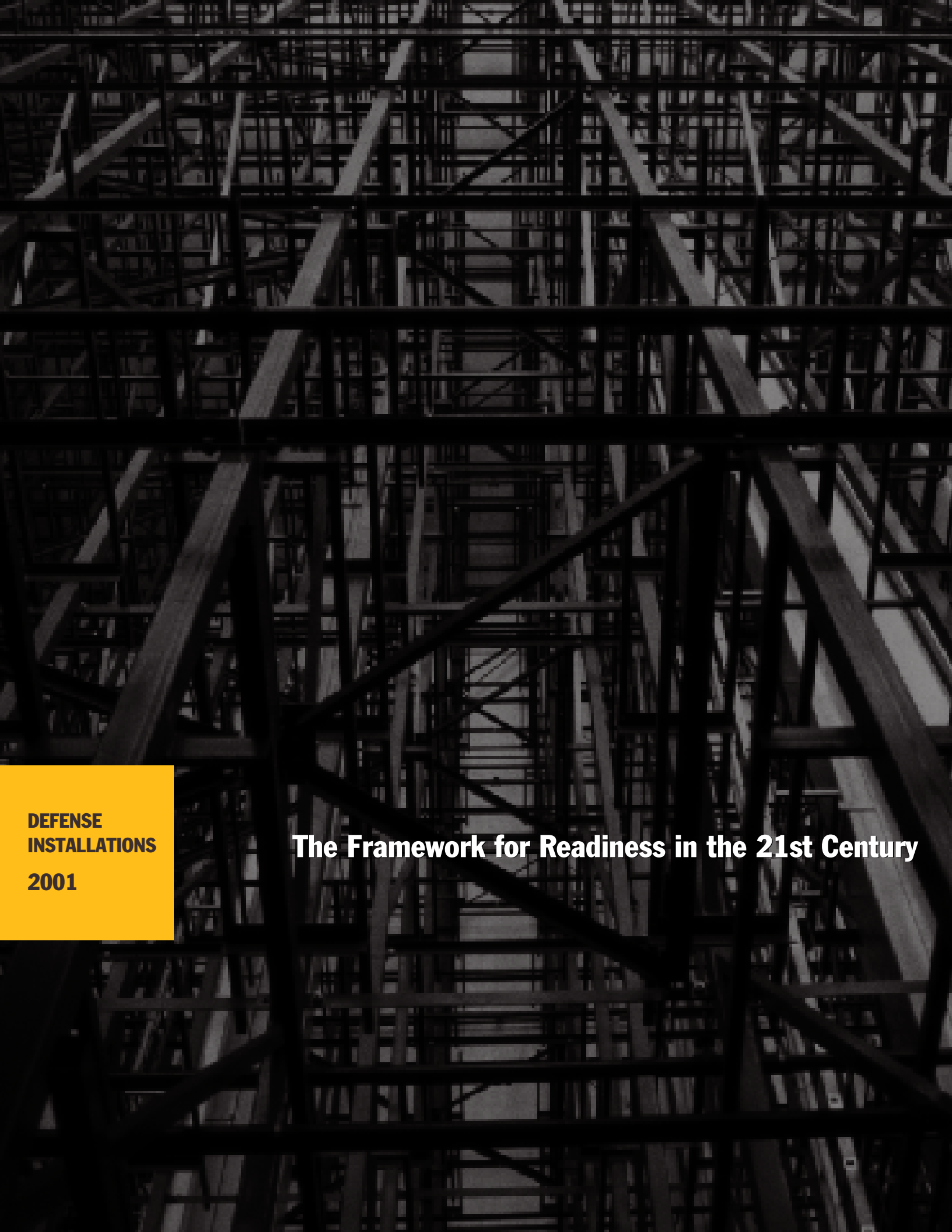


DEFENSE INSTALLATIONS

2001

# The Framework for Readiness in the 21st Century

# Installations Policy Board

## Defense Facilities Strategic Plan Working Group

## August 2001

# Foreword

America's security depends upon defense installations and facilities that are available when and where needed, and with the right capabilities to support current and future military requirements. This is our vision. It shapes our mission and serves as a framework for our plans, programs, and operations.

Our Nation's military professionals and their families are our most precious national security assets. We owe them the best housing, workplace and training environments we can possibly provide. Because we know we can never provide them all they deserve, we must be smart in planning how to provide them with more than we have in the past. We owe them a level of commitment commensurate with the tremendous personal sacrifices they make daily to defend our homeland and protect our national security. Thus, we are committed to supporting healthy installations, facilities, and housing that will enhance readiness, morale, and Quality of Service for our Defense personnel, who are constantly challenged with new and formidable tasks.

The sheer size and number of Defense Department installations and facilities complicate our plan. The Defense Department is the world's largest steward of properties, responsible for more than **46,425** square miles in the United States and abroad—nearly five-and-a-half times the size of the state of New Jersey—with a physical plant of some **621,850** buildings and other structures valued at approximately $**600** billion. These installations and facilities are critical to supporting our military forces, but they must be properly sustained and modernized to be productive assets. Unfortunately, nearly a decade of redirecting funds from Defense installations to other purposes has allowed our vital installations to decay at an alarming rate.

Defense facilities are durable capital assets, which, if properly built and sustained, have life cycles ranging to 50 years and beyond. However, in the absence of proper sustainment these facilities perform poorly and decay prematurely, and without modernization, they become obsolete. At present, the average age of our facilities is 41 years. If properly sustained, we could expect an average total life expectancy of 67 years—however with current funding in the post FY 2002 period, we will not be able to sustain the facilities and will recapitalize them on a 151—not 67—year cycle. This will not do.

Past under funding has led to the present emergency situation: Our Installations Readiness Reporting System shows that 69 percent of the Department's facilities are currently rated "C-3" (significant deficiencies preventing some mission performance) or "C-4" (major deficiencies precluding satisfactory mission accomplishment). We must not only restore the lost readiness, but also must improve our planning and make a long-term commitment to prevent this from happening again.

Recent decisions to increase FY 2000 budgets for support of installations represent our commitment to do better. But the deterioration occurred over a decade, so it is not reasonable to expect a one-year budget increase to fix the problem. The 2001 Quadrennial Defense Review reveals it will cost tens of billions of dollars spread over the next six to nine years to restore lost readiness, plus a steady, predictable stream of funding after that for sustainment and recapitalization to prevent the problems from reoccurring.

To better focus sustainment, restoration and modernization dollars, we need to eliminate obsolete and excess facilities that are beyond those needed for "surge" capabilities. We still have excess infrastructure at some locations, despite four rounds of Base Realignment and Closure (BRAC) coupled with our efforts to transfer of unneeded facilities to commercial uses. For now and the future,

we have an existing program of demolition and disposal and are proposing an Efficient Facilities Initiative to undertake more comprehensive restructuring. While we continue to realign, modernize, and consolidate installations we must also focus on acquiring new facilities, where required, to meet the current and future power-projection and operational needs of America's commanders-in-chief.

As leaders of the installations community, our mission is to provide, operate, and maintain defense installations and facilities that cost-effectively support military readiness. But this mission is complicated by the tenuous balancing of readiness priorities within DoD's programming and budgeting process. Historically, money earmarked for facilities was used as the "shock absorber" for unexpected costs in other programs. Now it is time for a long-term strategic plan consistent with the operational and readiness requirements of the military forces that our installations support. Only then can the proper resources be devoted to ensure that cost efficiency is measured over the life cycle of facilities, not just during a particular budget cycle, and that our strong commitment to readiness remains on course.

We must keep only what we really need, fully sustain what we have, and restore, modernize, or acquire new to meet current and future needs. This requires not only a strategic vision and long-term plan, but more resources as well. We need both to obtain more "real" money as well as "manufacture" more "effective" money through improved business practices. Creating more effective money will require innovative techniques, including privatization, new public-private business relationships, labor-management partnerships, and life cycle cost analyses that emphasize capital rather than band-aid budgeting to break the cycle of "pay me now or pay me much more later." Finally, how we measure and track our progress will influence, whether we like it or not, the type of programs we use to meet our long-term objectives.

To meet these challenges, we have established **four strategic goals:**

- **Right Size and Place:** Locate, size, and configure defense installations and facilities to meet the requirements of today's and tomorrow's force structures
- **Right Quality:** Acquire and maintain defense installations and facilities to provide quality living and work environments
- **Right Resources:** Leverage resources—money, people, and equipment—to achieve the proper balance between requirements and available funding
- **Right Tools and Metrics:** Improve facility management and planning by embracing best business practices and taking advantage of modern asset-management techniques and performance-assessment metrics

These are the key elements of our Defense Facilities Strategic Plan, which is the focus of this first *Defense Installations Posture Statement* for FY2001. The Defense Facilities Strategic Plan outlines a 20-year horizon of initiatives directly linked to our vision, our mission, and our goals …and to those held by our military operations planners. Following this framework, and staying the course, sets a "stake in the ground" for achieving our vision of modern, cost-efficient installations supporting operational readiness. Our ability to measure and track our progress through annual editions of this document is crucial to shaping critical resource-allocation decisions and guiding future policy, program, and budget reviews.

Military readiness begins at home. Our success during peacetime will make the difference in some future crisis or conflict when America's sons and daughters are sent into harm's way.

"Military installations provide the foundation for U.S. defense efforts. Maintaining these installations is, therefore, critical to supporting America's national security."

Annual Defense Report to the President and the Congress – 2001

# The Framework For Military Readiness

The readiness of the Nation's military forces to carry out critical roles, missions and tasks to protect U.S. citizens, interests, and friends wherever and whenever they might be at risk has been the subject of much debate and concern during the past year. As the Department of Defense focused on the second Quadrennial Defense Review, lively discussion examined the need for adequate research and development to ensure that today's military and tomorrow's forces have the technologies and systems needed to sustain superiority and defeat any threat. Commentators have scrutinized the planned procurement of ships, aircraft, armored vehicles, weapons and other systems to guarantee that America's Armed Forces—the Army, Navy, Marine Corps, and Air Force, along with the Coast Guard in its homeland security, national defense/military roles—can successfully carry out peacetime-presence, crisis-response, and wartime missions. Still others point to the need for adequate numbers of skilled people and sufficient fuel, ordnance, and spare parts to sustain the high-tempo operations of recent years, from the Balkans, to the Arabian Gulf, to the northwest Pacific, and close to home. Absent a substantial and continued increase in future defense budgets, there is growing uncertainty that America's Armed Forces can remain ready to support our National Security and National Military Strategies. As the Chairman of the Joint Chiefs of Staff testified before the House Armed Services Committee on 28 June 2001, "…I believe that our military remains the best in the world. But having said this, let me point out that our military advantage will erode over time if we ignore or if we fail to prepare for the evolving strategic landscape of this 21st century. Continuing to improve our current readiness posture while preparing for tomorrow's challenges will require additional resources."

While much of the debate focuses on research and development and weapons procurement requirements, there is a similarly compelling need to focus on the capabilities of the Defense Department's installations and facilities to meet the power-projection and operational-sustainment needs of our war-fighting commanders-in-chief. With the end of the Cold War and the subsequent search for an elusive "Peace Dividend," the Department of Defense addressed military strategies, doctrine, operational concepts, and force structure for the new security environment with an appropriate drawdown. At the same time, however, "expeditionary" and "net-centric" warfare concepts embraced by all U.S. Services place a greater reliance upon installations and facilities to provide immediate and continuing "just-in-time" support for rapid-response and maneuver operations. Operation Allied Force in Kosovo during the spring 1999 is an example of the total reliance not only on installations and facilities in forward areas but in the United States as well to satisfy campaign- and operational-level requirements. It is not an overstatement to recognize that Fort Carson in Colorado, Barksdale Air Force Base in Louisiana, and Norfolk Naval Air Station in Virginia were important nodes in the global network that sustained Allied Force operations and contributed to the achievement of U.S. and NATO aims.

In February 2001, President George W. Bush recognized the need for increased defense spending with his budget submission to Congress, A *Blueprint for New Beginnings*. That budget included $4.4 billion in proposed new money for presidential initiatives. Recent amended budget submissions have proposed an additional $18.4 billion, which increases the Department's total budget by $22.8 billion. This investment is clearly significant and represents the largest peacetime increase since the mid-1980s. But this must be viewed in the light of more than a decade of underfunding which forced the Department to virtually "live off" those investments made in the 1970s and 1980s. While the amended budget does provide for significant improvements and includes one-time increases totaling nearly $3 billion for supporting installations, it does not fill the hole caused by systemic under-investment in the past. It puts us on the path to recovery in some areas such as military pay and health care, but still leaves us short of our goal for facilities sustainment and recapitalization.

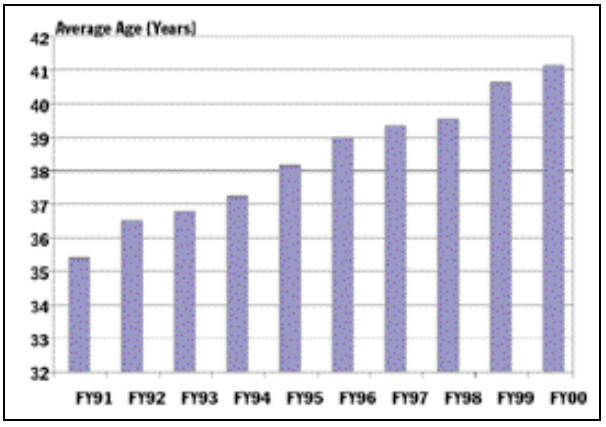



*Figure 1:*
**Average age increased 6 years during the past 10 years.**

When we turn our focus to the framework supporting operational readiness, we find the average age of Defense facilities is 41 years and rapidly increasing (*See Figure 1*). At 41 years, this is about 60 percent through the theoretical design life of these facilities, which we estimate overall at 67 years.

Sixty-seven years,however, is the theoretical service life, given full sustainment as envisioned by the facility designers. However, since the Department has not fully sustained these facilities, the expected life can be significantly shortened. Additionally, the average age continues to creep up due to insufficient recapitalization efforts—about six months for every 12 months that pass. Time is running out.

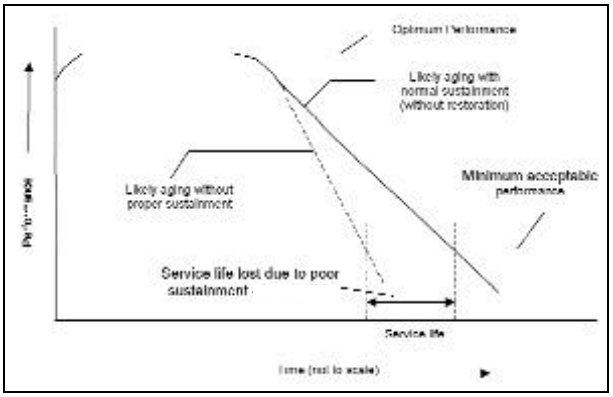



*Figure 2:*
**Lost service life and lost readiness.**

Despite the four BRAC —Base Realignment and Closure—"rounds" since 1988, many of the remaining installations and facilities are not adequate to meet the war-fighting and operational concepts of the 21st century. Thus,there is a growing requirement to realign and modernize existing defense installations and facilities as well as to acquire new facilities that can fully support our deployed forces. We must also take another hard look at disposing facilities and closing installations no longer required in the United States and overseas and realigning others to meet the operational needs of our commanders and their deployed forces.

Ensuring Quality of Service for the men and women who are the heart of America's military capability is likewise a fundamental need. Quality of Service includes all tangible and intangible elements normally associated with Quality of Life—adequate compensation and retirement packages,comprehensive health care, housing, amenities, and dependent care—but encompasses as well the jobs that they do, the physical surroundings in which they work, and future career potentials. We know recent recruitment and retention shortfalls—in many instances directly attributable to Quality of Service concerns—have made military readiness a source of concern.

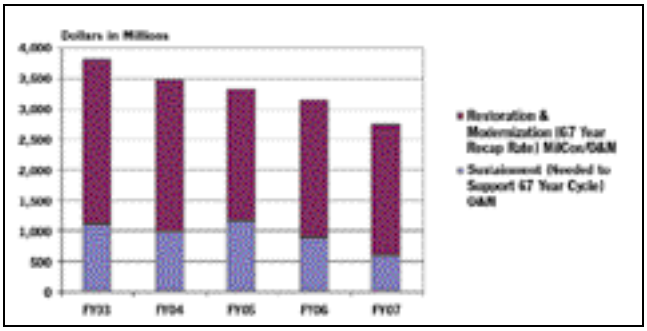



*Figure 3:*
**Shortfall in sustainment and modernization.**

To ensure that our defense posture remains strong and the Quality of Service for our men and women in uniform, our civilians, and their families is excellent, our military installations and facilities must be functionally, technologically, and humanly sound. The Defense Department must be forward leaning in addressing the compelling needs of its military forces and the ways in which installations and facilities can respond and adapt to changes in strategy, doctrine, roles, missions, and force structure. We know that it will be impossible to do all that is needed immediately in an environment of fiscal constraints. However, we can be much smarter in the way we approach our mission, and allocate our funding where the need is greatest, while we strive to break the cycle of "pay me now or pay me much more later," which has typically characterized our programming and budgeting efforts in the past. Without proper sustainment, restoration, and modernization, performance declines, readiness and mission support suffers,service life is lost,and total costs rise (*see Figure 2*).

Despite recent attention to our resources problem, there is still the potential for a growing "bow wave" of unmet requirements for the sustainment, restoration, modernization,and replacement of our defense installations and facilities. As Secretary of Defense Donald H. Rumsfeld has pointed out on numerous occasions, "…one generation bequeaths to the next generation the capabilities to ensure peace and stability and security." What will we bequeath? Will it be the estimated $62 billion cost that we inherited to restore minimal readiness? Or can we do better?

Looking forward to the Fiscal Year 2003-2007 Future Years Defense Program (FYDP), even if all of current funds were to be appropriated, we would still confront a shortfall of some $16.5 billion to simply sustain and modernize our facilities at a 67 year rate, an average shortfall of $3.3 billion per year (*See Figure 3*).

## Background

The challenges confronting America's military installations and facilities today constitute a critical factor in our current and future military readiness. Indeed, 69 percent of the Department's facility classes in late 2000 were rated "C-3" (significant facility deficiencies that prevent it from performing some missions) or "C-4" (major facility deficiencies that preclude satisfactory mission accomplishment) —posing significant risk to missions (*see Figure 4*). In recent years, while we have restored and modernized some facilities, we have simultaneously failed to fully fund basic sustainment for adequate facilities. So those facilities that were adequate become inadequate and those we have restored quickly begin to fail. It was a "death spiral," thereby making it impossible to improve the current readiness status.

More succinctly, we need to keep only what we really need,fully sustain what we have, and restore, modernize or acquire new to meet current and future needs. The Department should begin by committing to full funding of the sustainment and a regular schedule for recapitalization of those facilities that we plan to keep—year in and year out. This need was recognized in the report of the 1997 Quadrennial Defense Review—"program more accurately for the costs of operating the defense establishment"—but never implemented. Where less than full sustainment has caused the cost of lost service life, or where less than adequate recapitalization has left us with an obsolete inventory, we will need to do more now rather than defer the work indefinitely. This requires a strategic vision and long-term plan, as well as additional resources. Not only must we obtain more real funding, we must be able to manufacture more "effective funding" through improved business practices and innovative techniques, including privatization, new public-private business relationships, and life-cycle cost analyses that emphasize capital budgeting.

With this in mind,in 1998 the Deputy Secretary of Defense requested that work begin on the Defense Facilities Strategic Plan. To ensure the correct focus, we convened a special working group under the Installations Policy Board (IPB), which is chaired by the Deputy Under Secretary of Defense for Installations and Environment. The IPB is the organization through which important issues affecting installations and facilities are discussed and key decisions made. The IPB's Defense Facilities Strategic Plan Working Group includes representatives from the engineering, financial-management, resource-planning and programming, and installation-management communities in the four military services and selected agencies in the Department of Defense.

The Working Group has crafted the Defense Facilities Strategic Plan to provide a unifying framework within which Department-wide strategies have been consolidated and directly linked to our vision,mission,and goals for installations and facilities. This plan identifies several key initiatives that are focused on achieving specific Department-wide goals. The goals, in turn,lead to accomplishment of the mission and vision for Defense installations and facilities, all in consonance with the *Defense Planning Guidance, Joint Vision 2020*, and Service-specific strategic concepts. *Joint Vision 2020* for military operations should be supported by a "Vision 2020" for installations.

The short-term timeframe of the Defense Facilities Strategic Plan discussed in this FY2001 Defense Installations Posture Statement is the Fiscal Year 2002-2007 FYDP. The FY 2002 amended budget demonstrates our support and a strong commitment to providing the right support needed to sustain and modernize our aging infrastructure. It also recognizes the need for a long-range plan to streamline, restructure, and restore DoD facilities to meet their readiness mission. Because of the depth of the challenges we face in several areas and the affordability issue, however, we recognize that several goals can be reached only in the years following the 2002-2007 FYDP. Likewise we know that programs put in place today can have implications for readiness decades into the future. One of the key long-range goals may be the Efficient Facilities Incentive (EFI) designed to focus on the reduction or elimination of infrastructure to generate a cost savings.

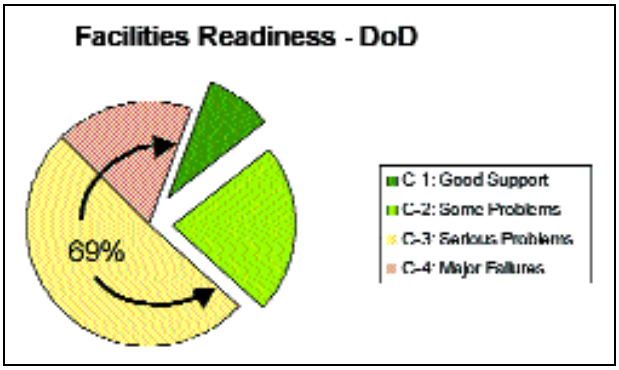



*Figure 4:*
**Installations Readiness Report,FY 2001.**

Finally, as most of our facilities have economic service lives of 50 years or more, the Defense Department's programming horizon of six years and two-year budgeting cycles does not adequately address the capital budgeting needs of installations and facilities,as shown in *Figure 5*. For these reasons, the Defense Facilities Strategic Plan takes a much needed long-range perspective, with a planning horizon for acquisition,sustainment, reastoration, modernazation and operations needs that extends 20 years into the future. To obtain full return on its facilities investment,the Department should plan and budget for facilities with a long-term, life cycle-based vision. Programming and budgeting methods should be altered to illuminate the long-term view, consistent with the enduring life cycle of facilities. The Defense Facilities Strategic Plan has been crafted as a "total force" plan—addressing the requirements and resources for all active-duty and reserve military forces and defense agencies to achieve our installations and facilities vision.

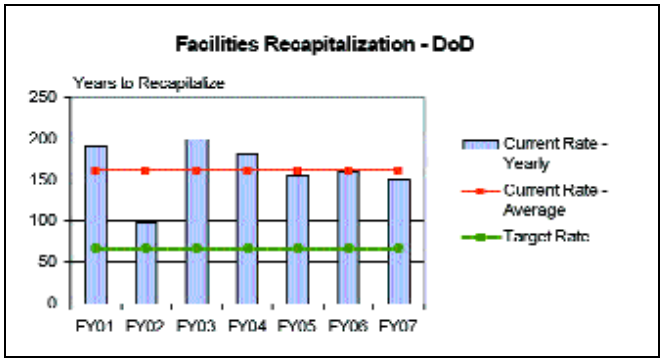



*Figure 5:*
**Recapitalization to counter obsolescence.**

"Under the 2001 enacted budget, DoD was replacing facilities at an unbelievably poor average rate of 192 years, not the target of 67. The 2002 budget gets us closer; it would allow us to replace facilities at an average rate of 101 years, an improvement, but still well off the acceptable target of 67 years. We could do better."

Secretary of Defense Donald H. Rumsfeld, House Armed Services Committee – July 2001

# Defense Facilities Strategic Plan

## Our Vision...

Installations and facilities are available when and where needed, with capabilities necessary to effectively and efficiently support DoD missions.

Our vision clearly encompasses both installations and facilities. This is an important consideration, for the synergy we seek will ensure that the whole is indeed much greater than sum of the constituent parts. Facilities are individual buildings, structures, runways, utility systems or any other part of the improved real property. Installations are collections of facilities, including such expansive areas as weapons and training ranges—at sea, on the ground, and in the air. Our vision is thus focused on both levels—to ensure that facilities and installations have the right characteristics and capabilities to satisfy our people's needs for Quality of Service and our forces' operational requirements.

Second, our vision speaks of availability—to ensure that the Department has installations and facilities in place at the needed locations and in time to support the mission. This is essentially a question of capacity management, and our vision requires us to achieve a balance between what is required and what is actually on hand to do the job. While we seek a perfect balance between requirements and current inventory, we understand fiscal constraints make compromise a necessity in the near term. Thus, we continue to assess and respond to our most urgent needs while at the same time working to provide the resources to enhance all elements of the Nation's Defense "physical plant" in a timely manner.

Third, our vision focuses on capability—to guarantee that installations and facilities have the qualities and characteristics and are in the condition needed to perform their functions. This is at core a question of lifetime management, and our vision is to have properly designed, well-maintained, and appropriately modern facilities in which to conduct training and military operations and provide housing and other community services for our people and their families.

Finally, our vision embraces effectiveness and efficiency. This requires the Department of Defense to reach the proper balance between performance and cost. Our vision is unaffordable if cost is sacrificed for ultimate performance. Likewise, our vision is unattainable if decisions on cost are made in the absence of their ultimate effect on performance. In short, we have ample opportunities to make investments in the near-term that will have significant long-term benefits in cost-avoidance and reduction. Moreover, these will be vital for ensuring the proper Quality of Service for our people, a key factor for our future operational readiness.

**Properly designed and well-maintained modern facilities provide enhanced Quality of Life.**

Our vision is simple to state but frankly has proven difficult to achieve. Despite the vital importance of modern, cost-effective installations and facilities for the well-being of our people, the readiness of America's military forces, and the conduct of operations world wide, it has been a challenge to ensure that the needed resources are available, allocated, and are executed when and where they are needed to keep our installations and facilities fully capable. Too often, installations and facilities accounts have been "bill-payers" for other important needs in Defense Department programming. This has had a significant impact on the Quality of Service of our people and has contributed to

challenges in sustaining the readiness of our forces and the retention of our people, which are at the core of our mission as stewards of the Nation's defense infrastructure.

## Our Mission...

Provide, operate, and sustain, in a cost-effective manner, the facilities necessary to support our military forces—in both peace and war.

The Department of Defense employs thousands of people whose job responsibilities are wholly or partially associated with installations and facilities. This "facilities community" is not usually recognized as a formal group, but it includes engineers,administrators,and commanders on site at the installations as well as engineers,analysts,comptrollers,lawyers, environmentalists,and senior leadership throughout the Armed Services, defense agencies,and Office of the Secretary of Defense.

In seeking to achieve the Department's vision for installations and facilities,it is essential that all members of this "community" work together to implement initiatives and reach the goals outlined in the plan. Our mission statement incorporates a total life-cycle management view of facilities, from their acquisition through their replacement or disposal,in peacetime, crisis, and war.

## Our Goals...

Focus Department-wide efforts and activities to contribute to the accomplishment of our mission and achievement of our vision for installations and facilities.

We have identified four overarching goals based upon a comprehensive assessment of the opportunities and challenges facing the Department of Defense in the new century. Each goal represents an area in which significant improvement is needed and in which we believe significant progress is possible. The goals are mutually supporting and address requirements across the spectrum of installations and facilities planning, programming, budgeting, and operations. In summary, the four strategic goals are:

- **Right Size and Place:** Locate, size, and configure defense installations and facilities to meet the requirements of today's and tomorrow's force structures
- **Right Quality**: Acquire and sustain defense installations and facilities to provide mission-ready installations with quality living and work environments
- **Right Resources:** Leverage resources—money, people, and equipment—to achieve the proper balance between requirements and available funding
- **Right Tools and Metrics:** Improve facility management and planning by embracing best business practices and taking advantage of modern asset-management techniques and performance-assessment metrics

Figure 6 graphically depicts the strategic plan's framework in simple terms. The design intentionally avoids complicated terminology that could be confusing or not applicable throughout the Department. Instead the objective is met with a simple design and common terms.

The discussion that follows provides more information on each of the four strategic goals and the

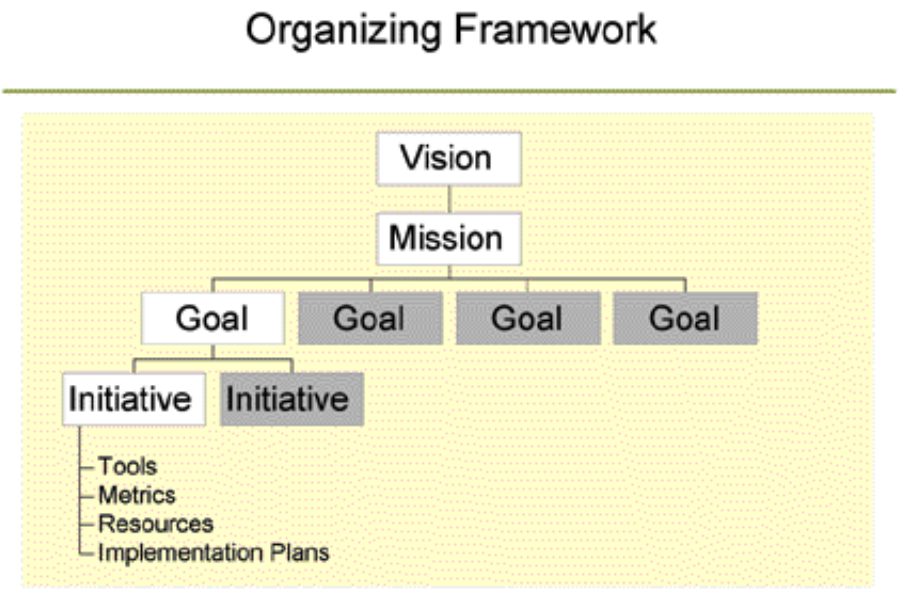



*Figure 6:*
**Defense facilities strategic plan framework.**

Runway repairs enhance operational readiness.

various initiatives. In some cases,the initiatives have already been put in place while others are still in various stages of implementation. However, the focus of all of the initiatives is to ensure that the goals will be achieved. While each initiative may be logically linked to a single, primary goal, in reality each initiative can have a direct affect on one goal as well as indirect affects on other goals. As an example, the Department's initiative to demolish and dispose of excess and obsolete structures is directly related to the Right Size and Place goal. However, demolishing facilities also frees up scarce resources that can be applied elsewhere, which means that this initiative also supports the Right Resources goal. And, if properly reallocated, these resources can contribute to Right Quality.

## Right Size and Place

**Too much or too little—or misalignment—can degrade readiness.** The Department's Right Size and Place goal is to improve the balance between the installations and facilities inventory on hand and the inventory actually required by our military forces and missions, while preserving the quality of the operational training environment. It also looks forward, well beyond the current six-year FYDP, to determine trends and future requirements that may drive changes in our installations and facilities. Thus, we have been active participants in the 2001 Quadrennial Defense Review to ensure that our physical plant will indeed be able to meet future needs at a cost that America is willing to bear.

However, as we have witnessed during the last decade, it is far easier and quicker to alter the distribution of mobile force structure assets—like people and systems—than fixed assets like facilities and installations. To improve the balance between installations and facilities inventory and force structure and operational needs, the Department has identified the following requirements:

- Realign and modernize installations and facilities—including acquiring new facilities—to take into account evolving military strategies and the needs of U.S. commanders-in-chief
- Close excess installations and demolish and dispose of obsolete facilities and structures on installations that remain open
- Privatize facilities where feasible

Our plan includes several key initiatives directed toward this goal.

### EFFICIENT FACILITIES INITIATIVE

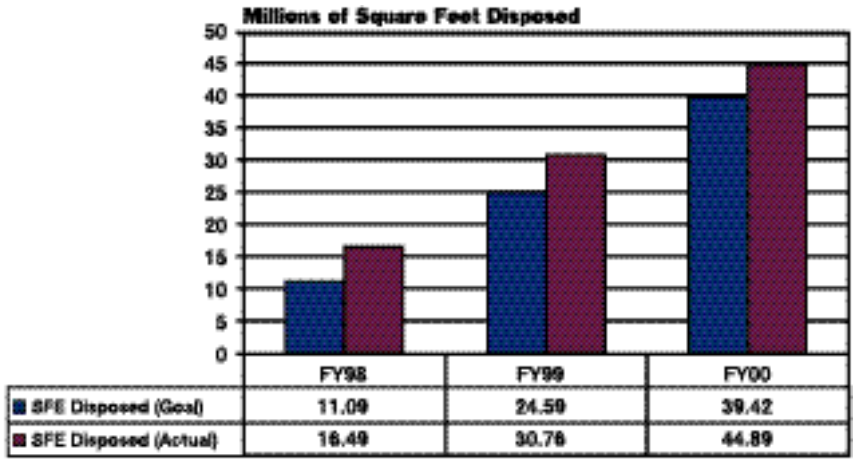
The efforts to re-size our military forces in the aftermath of the Cold War has resulted in a much leaner force that nonetheless has had to sustain a worldwide operational tempo higher than at any time during the Cold War. Based on this drawdown, we now have a 30 percent smaller force, but unfortunately they are doing 165 percent more missions. In recent years, the National Command Authorities have committed U.S.forces to a crisis or conflict, somewhere in the world, on the average of once every nine weeks. During this same period, we have reduced our inventory of installations and facilities supporting these forces—increasing the utilization rate of those that remain—but more still needs to be done. There remains a mismatch between

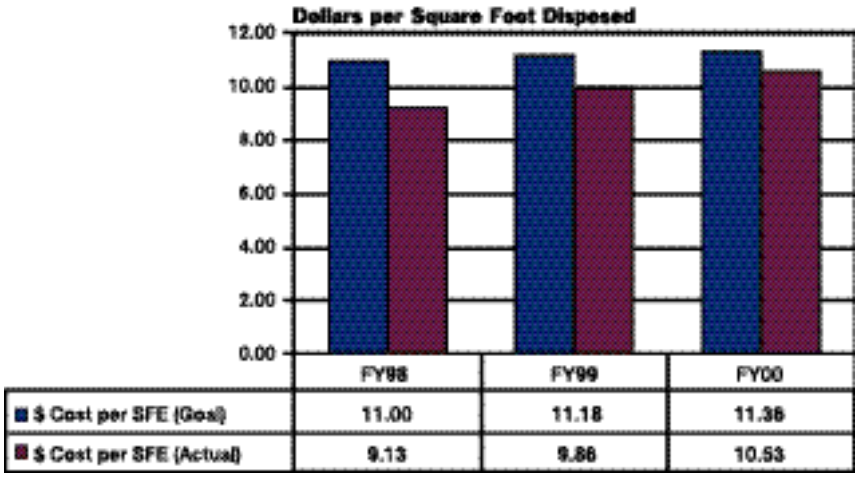
Navy piers: **Before** *(left)* **After** *(right).*

supporting infrastructure and the supported forces. This mismatch has been exacerbated by the obsolescence of some of the remaining infrastructure and the fact that some facilities and military units are ill-positioned to support current and future operations. Operating and maintaining this "obsolete" inventory wastes scarce resources that could be better spent on realignment, facilities modernization, and readiness to carry out operations in support of the *National Security Strategy* and the *National Military Strategy*.

If Congress approves our Efficient Facilities Initiative, we will be able to tailor our infrastructure to match our restructured operating forces, as well as to streamline business practices, and in so doing generate needed savings. With this new authority, we will be able to plan better for a smaller, but better-supported, installations and facilities inventory with a more robust modernization program, thereby contributing to sustained high levels of military readiness.

*Figure 7:*
**Demolition & Disposal Program Cumulative Results.**




In addition to DoD realignment for efficiency, the private sector has reaped other economic benefits as a direct result of previous installation closures. The redevelopment of the 76 major bases closed or realigned so far has created approximately 61,000 new civilian jobs and more than 1,400 new tenants at these former DoD installations. We now have the authority to transfer base-closure property to Local Redevelopment Authorities (LRAs) at no cost through Economic Development Conveyances (EDCs). These EDCs require an LRA to agree that any proceeds from the sale or lease of the property received during the first seven years following the date of the transfer will be specifically allocated to the economic redevelopment of the installation. After the seven-year period, the LRA is free to use or transfer the property, as it may desire. In the meantime, valuable jobs have been created.

## OBSOLETE AND EXCESS STRUCTURES

Installation commanders have reported they must often shift funds from key requirements, such as training and operations, to maintain obsolete facilities because they lack the funds for demolition of these facilities. Obsolete and excess structures drain resources that could otherwise be allocated to higher-priority requirements. They also entail risks to the safety of our people, their families and the surrounding community, and are often eyesores that degrade the aesthetic quality of our installations. The Defense Reform Initiative (DRI) recognized this problem and outlined a plan for demolishing excess facilities. By investing in demolition and disposal of these unneeded facilities, we will be able to focus our scarce resources on modernizing other facilities or acquiring new facilities that meet today's and future needs, while simultaneously improving the safety and the quality of our installations for our people and our neighbors. While the migration of funds can never be reduced to zero, this initiative will forever remove from the inventory those obsolete and excess structures that deplete resources needed for higher priority defense requirements.

The quantity- and time-performance goals of this initiative are measured in millions of square feet (MSF)—or square-foot equivalents (SFE) for structures other than buildings—removed from the inventory by a specific target date. The DRI goal is demolish and dispose of more than 80 MSF—including 8,300 individual structures itemized in a 1997 survey—during the Fiscal Year 1998-2003 period. Our experience thus far has shown

that the disposal cost per square foot ranges from less than $5 to more than $20, depending on the complexity of the structure, the presence of environmental hazards, the amount of recyclable material, and the amount of in-house labor used.

To reach our Fiscal Year 2003 goal with available funds, we must hold costs to an average of $11.10 per square foot net, including any proceeds from salvage and recycling. As of the end of Fiscal Year 2000, we had disposed of about 44.9 MSF—nearly 5.5 MSF ahead of schedule—at an average cost of $10.53 per square foot, about 7 percent less than the projected cost. Against the total actual cost of $473 million incurred in 1998-2000, we realized $185 million in maintenance and operations cost-avoidance, and we anticipate future savings on the order of approximately $90 million per year for these projects alone. These savings will grow still higher as the Services plan to continue the demolition program past Fiscal Year 2003, as shown in *Figure* 7.

## LEASING UNDERUTILIZED FACILITIES

Our authority to lease underutilized facilities on those installations being retained is an important element of our overall management strategy. In June 1999, we reported to Congress that the existing authorities under Title 10, United States Code, had certain limitations that, if removed, would enable the Defense Department to employ its underutilized capacity more effectively and further reduce installation support costs. As a result, Section 2812 of H.R. 5408, the National Defense Authorization Act for FY 2001 significantly revised the Department's leasing authority, particularly in its treatment of in-kind consideration. We continued to work with Congress to make the necessary changes to our legislative authorities. In August 2001, the Department submitted to the 107th Congress its Efficient Facilities Initiative of 2001 as part of the legislative program, One part of this three-part effort proposes innovative ways for the Military Departments to partner with local communities for the ownership, lease, operation, or maintenance of those installations that will remain part of its enduring base structure. Enhanced-use leasing allows us to partner with the private sector and local communities to maximize the economic efficiencies of base and community-support services. With the incentive of expanded use of cash proceeds along with an expanded array of in-kind services, outlease proceeds of $25 million ($15 million in cash and $10 million in-kind) could grow substantially during the next four years. In order to encourage installation commanders to actively pursue enhanced-use lease opportunities, cash or in-kind consideration from these enhanced-use leases should be allocated to those installations for tangible improvements.

**"Temporary" facilities sometimes become permanent, eventually needing "temporary" augmentation to meet growing demands.**

## JOINT USE OF FACILITIES

We are also pursuing ways to optimize the joint—multi-Service or multi-component within Service—use of facilities and installations and to encourage Defense Department components to maximize the use of existing facilities before embarking upon new-construction projects. Installation commanders now must consult with all tenant activities on their bases before submitting proposals for new construction, to determine the extent to which individual requirements can be consolidated into a single, more cost-effective project.

Looking beyond the individual installation, commanders of installations within a single district or region—which can encompass several states—are increasingly joining forces to procure such services as base maintenance and repair, telecommunications, and other base-operating support. In coalitions encompassing several states, numerous installations are joining together to enhance their bargaining power to procure electricity, natural gas, water, and other resources. Through these joint-use initiatives, we believe we can avoid potentially higher costs and achieve some cost savings. In other cases, we will seek to privatize such facilities when it makes good business sense to do so. In addition, the Department could make more effective use of Military Construction funding with appropriate incentives and a policy for the Services and other Defense Agencies to coordinate and develop joint use projects early in the planning process.

Recent examples of savings from joint construction projects are the Joint Mobility Center at Elmendorf

AFB, Alaska, which saved the Air Force and Army as much as 20 percent of the cost to build separate mobility facilities. Likewise, the joint Armed Forces Reserve Center at Gray, Tennessee, which combined construction projects for the Army Reserve, Army National Guard and Marine Corps Reserve into a single facility project, saved millions of dollars by not constructing three separate facilities.

### LAND USE COMPATIBILITY AND ENCROACHMENT MANAGEMENT

As more and more base infrastructure is reduced through reduction initiatives, the relative importance of each remaining installation's contribution to military readiness has risen. Retention of military installations with the highest military value has increasingly put the government in intense competition with the civil sector for the land, sea, and air resources required to meet operational training requirements. We need to ensure that we retain or secure not just the "right size" of the built environment, but also the "right size" of other interests, to include land, water, airspace, and even the frequency spectrum necessary to support and protect our readiness capabilities and preclude conflicts with the civil community over the use of these resources.

## Right Quality

**The best military in the world deserves the world's best installations and facilities.** Our objective here is to provide an inventory of facilities that possesses the capabilities necessary for military operations, training, maintenance, housing, and community support. To do so, the Defense Department needs a sound acquisition program that procures properly designed facilities and delivers them to its people in a timely and cost-efficient manner. Once in operation, we must preserve the quality of our facilities through proper sustainment, restoration, and modernization programs. In the absence of such programs, the Defense Department's facilities will atrophy and readiness will suffer.

Neglected facilities impair Quality of Service and Quality of Life.

Our plan includes several initiatives that are already improving the quality of facilities supporting the living environment on installations—principally focused on family housing and barracks for our enlisted men and women. Understanding that the quality of housing is a critical factor in attracting and retaining the people we need, the Secretary of Defense has made this one of the Department's highest priorities. There are three elements to this initiative:

- **Increase housing allowances to eliminate the out-of-pocket costs paid by Service members for private-sector housing**
- **Increase reliance on the private sector through housing privatization**
- **Maintain military construction funding to sustain, restore, and modernize the housing inventory that will remain in the Department**

Just as important, however, our plan contains several initiatives directed at improving the operations and working environment on the Department's installations. While we have achieved much, more needs to be done to ensure that our people and their families enjoy the complete Quality of Service that they deserve.

### MODERN BARRACKS

The Department of Defense provides barracks worldwide for 383,000 enlisted service members. In November 1995, the Secretary of Defense issued a new standard for construction of permanent-party barracks. The new standard calls for 11 square meters of private living and sleeping space for each individual—a substantial increase over the previous standard—and a bath and kitchen/service area to be shared by two junior enlisted members (E-1 to E-4). This standard became known as the "1+1" program. In June 2001, the Deputy Secretary of Defense (DEPSECDEF) revised the living/sleeping space up to 17 square meters, eliminated the 47 square meter module limit, but limited overall gross to 66 square meters per Service member.

The November 1995 memorandum announcing the "1+1" barracks standard provided the military services with sufficient flexibility to establish their own implementation schedules. It also provided them the authority to waive the standard in certain situations. The fact-of-life of constrained Military Construction (MILCON) resources means that modernization of existing barracks or, where possible, their replacement, will require years to achieve. The Army anticipates attaining the "1+1" standard by 2008 with a waiver in Korea to construct to a "2+2" standard. The Navy expects to meet the "1+1" standard by 2013. The Air Force goal is to provide all unaccompanied E-1s to E-4s a private room by 2009, by housing one Service member in existing

Modern medical facilities support service members and their families.

"2+2" dormitory rooms. New "1+1" standard dormitories will be constructed to eliminate dormitory space deficits and existing "2+2" spaces will be replaced at the end of their useful life using the "1+1" standard. The Marine Corps has been granted a waiver to construct to "2+0" barracks standard, to improve unit cohesion for E1–E3s. The Marine Corps will be able to house two Marines per room by 2021. All of the services expect to meet the goal of eliminating open-bay berthing and "gang" latrines by 2008.

The privacy and amenities provided by the "1+1" standard and the elimination of open-bay berthing and central latrines represent a great improvement in the Quality of Service for our junior service members. We have already seen indicators in recruitment and retention that underscore our conviction that improving the Quality of Service directly contributes to higher morale, retention, and, ultimately, operational readiness.

## FAMILY HOUSING PRIVATIZATION

The Defense Department owns nearly 300,000 family housing units on and off bases in the continental United States and overseas. Nearly two-thirds of the units are in need of significant restoration and modernization, or outright replacement. The expectations of our people and their families are similar to their civilian counterparts: quality homes, with modern kitchens and well-finished family rooms, and exterior enhancements including landscaping, good site placement, and neighborhood facilities—in short, a community or a place that they can call "home."

Our people and their families deserve a quality place they can call "home".

The FY2002 amended budget continues the Department's focus on improving housing conditions for military families living both on- and off-base, consisting of these elements:

- Increase housing privatization
- Maintain MILCON funding to fix what we must own
- Increase housing allowances to immediately improve availability of quality housing options—reducing out-of-pocket expenses from the current 15 percent to 11.3 percent for FY2002 and eliminate the average cost completely by FY2005

**Our goal is to eliminate completely inadequate military family housing by 2010.**

Completing the renovations and replacements using traditional military construction would cost taxpayers nearly $20 billion and take approximately 30 years. Recognizing that this clearly would be unacceptable, we are pursuing an alternative—privatization—approach to solving our housing "challenge."The Military Housing Privatization Initiative, included in the 1996 National Defense Authorization Act, allows us to provide the private sector with direct loans, guarantees for both loans and rental occupancy, and differential rent payments; to convey or lease Defense Department-owned property and facilities; and to invest in limited partnerships—all focused on guaranteeing good housing and related amenities to our people and their families,in close partnership with private-sector providers. Although these housing projects can be sited either on- or off-base, we believe that on-base housing allows our Service members to remain close to their military missions and to provide their families with tangible and intangible support during deployments.

Our goal is to privatize more than 37,000 housing units by the end of Fiscal Year 2001 and eliminate completely inadequate military family housing by 2010. By improving existing housing and creating higher quality and more affordable housing both on- and off-base, we will improve the Quality of Service for our people.

We have made a good start toward achieving our goal,with 6,674 units privatized by the end of Fiscal Year 2000. As part of our privatization effort, the Services have been working with the Department to develop installation-level family housing master plans, detailing the housing inventory by base, the number of units requiring renovation, and the method determined by the responsible Service to improve those units. We will carry these master plans forward, and request the resources necessary to ensure their success in meeting the needs of our people and their families.

## HOUSING ALLOWANCES

In 2000, the Secretary of Defense proposed increasing the Department's program for housing allowances by more than $3 billion during the next five years. This will eliminate, by Fiscal Year 2005, the current requirement for at least 15 percent out-of-pocket expenses to be paid by service members who live in private housing. In Fiscal Year 2000, the

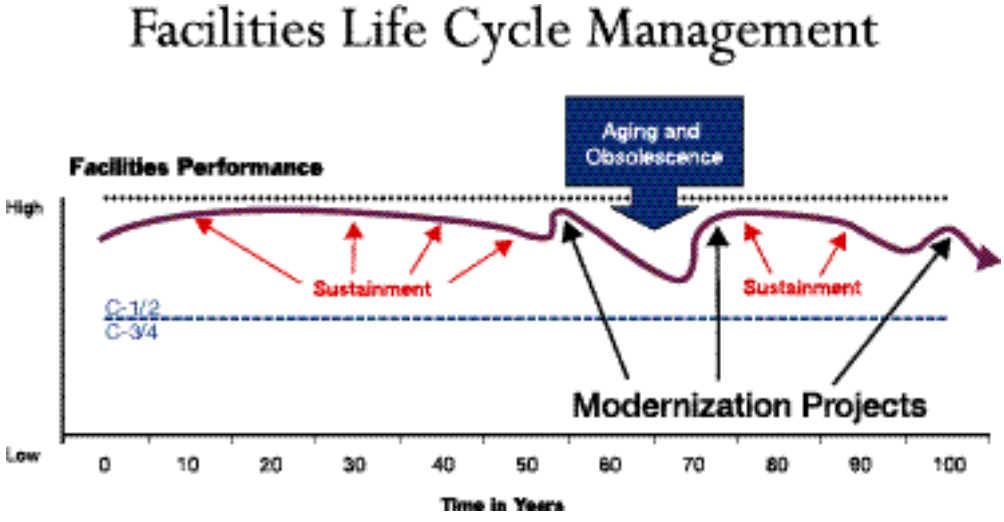



*Figure 8:*
**Effective Performance Management.**

average out-of-pocket costs were approximately 19 percent. This initiative will provide our people with more money for housing and essentially level the playing field between those who live in government-owned housing and people living in the private sector. We also expect that greater housing allowances will increase our people's access to quality housing, as private-sector developers will be encouraged to make the necessary investments in additional housing near defense installations.

The combination of housing privatization initiatives and increased housing allowances directly affect our people's Quality of Service, and will contribute to enhanced recruitment, retention, and readiness.

## A QUALITY WORKPLACE

If we hope to attract and retain the people we need to carry out the missions and tasks of the 21st century, we must provide them with a quality workplace in which they can do their jobs. The commercial sector understands this, and we are partnering with industry and academia to pursue the research, demonstration projects, and development to improve the quality and performance of our facilities. We seek to increase our people's satisfaction, well being and productivity as well as enhance our facilities' cost-efficiency, environmental health, and effectiveness.

We need to better manage the life cycle of our facilities to maximize performance over the long term. Using what we have learned from the commercial sectors, we now know the importance of sustaining our facility assets—not just for the well-being of our people, but also to extract the maximum return from our capital investments in facilities. Using new modeling capabilities, we can now forecast with confidence the investment needed annually and over the long term, based on the exact composition and location of the inventory that we plan to own. To remain relevant and ready over the long life cycle of facilities, proper sustainment must be supplemented with regular modernization investments. We have cut the recapitalization rate—the rate at which we modernize, restore or replace our facilities—in half, from nearly 200 years to about 100 years, and our goal is to bring it down to a maximum of 67 years, as shown in *Figure 8*. The target of 67 years is based on an analysis of the type of facilities we have under management, and is a conservative estimate of requirements when compared to commercial benchmarks.

From the embassy bombings in Africa to the New York World Trade Center bombing to the sarin gas attack in the Tokyo subway, we know that we live in dangerous times. The possibility of a terrorist attack on a Defense installation or facility has not been ignored. We have established Antiterrorism Force Protection Construction Standards, and the Secretary of Defense has directed the Services to ensure that measures to safeguard our people are included in both new construction and modernization projects.

Likewise, we know that we must enhance the environmental stewardship of our activities. Part of our strategy to reduce energy and water consumption focuses on the construction of new facilities using "sustainable design" concepts and techniques

**We must provide our people with a quality workplace in which they can do their jobs.**

and energy-efficient materials,or upgrading existing buildings with more energy-efficient systems. "Sustainable design"buildings make best use of available resources by embracing innovative technologies to reduce energy and water consumption, decrease waste products, and increase the recyclable content of construction materials.They do so while creating productive, healthy, and livable surroundings for their occupants. By emphasizing lowest life-cycle/total ownership costs and enhanced lifetime flexibility, we are exploring the most energy-efficient and environmentally sustainable products while optimizing features capitalizing on local natural conditions, such as day-lighting, passive/active solar, and solar-thermal applications. For example, during the late 1990s we installed more than 2,500 "solar roofs"in a "Green Power"initiative, which also saw us actively encouraging local and regional power utilities to use renewable sources for providing electricity to Defense installations.

Moreover, our studies have shown that if we do it right during the initial planning and construction stages—including the use of modular, open-architecture concepts that enhance operational flexibility—we can save significant resources over the total lifetime of the building or facility. Such "value-engineering"approaches, coupled with "sustainable design"concepts,will be key for lowering our total ownership costs and ensuring that our facilities will remain capable of meeting future needs.

**Systems privatization along with utility upgrades are key elements of our plan.**

Our concern for the environment is underscored in other important ways. For example, by the end of Fiscal Year 2000, we had completed analyses required under the National Environmental Policy Act at more than 80 percent of all BRAC-related installations and facilities. We have put remedies in place or reached response-complete status at 67 percent of active installations, 45 percent of formerly used defense sites,and 43 percent of the BRAC installations.

## MODERN UTILITIES AND TELECOMMUNICATION SYSTEMS

Today, the Department spends more than $6 billion per year on utilities—electric, water, wastewater, natural gas,and telecommunications. Because of higher funding priorities elsewhere, military-owned utility systems have not been adequately maintained.As a result,installations-related Quality of Service has declined, and we now find ourselves in a position that requires us to upgrade or replace much of our utilities infrastructure. However, the Department cannot afford to own, operate and maintain all of this aging utility infrastructure, particularly when the private sector can provide such services more cost-effectively and make the necessary capital investments to keep pace with future requirements. Where possible, We must get the Department of Defense out of the utility business.

To make the upgrades and replacements affordable, we have implemented an aggressive program to privatize our utility systems when it is economically feasible and where no unique security reasons require Defense Department ownership. By privatizing our utility systems, we will be able to reallocate funds to modernization, as well as to leverage our enormous purchasing power by allowing us to focus on managing our utility needs instead of providing for them ourselves. The ability of installations to support the military operations conducted from them, and to provide the quality of life for those who live and work there, will be dependent upon improved utility infrastructure.

The Defense Reform Initiative Directive (DRID) #49 of 1997 originally required the Armed Services to privatize their electric, water, wastewater, and natural gas systems by 1 January 2000. This goal proved much too aggressive and was amended to 30 September 2003, with two interim milestones:

- **For all systems, determine whether to pursue privatization by 30 September 2000 (i.e., "go/no go" decisions)**
- **Issue all requests for proposals (RFPs) by 30 September 2003**

Pushing the deadline to 30 September 2003 has given us the flexibility to pursue a more prudent contracting process that incorporates the lessons learned from other privatization experiences. Additionally, we have structured a more pragmatic and affordable funding profile for the up-front costs of privatization, and we have been able to include several installations outside of the continental United States.

Even with the extended time frame, however, we are seeking additional congressional assistance to our utility-privatization plans. Although Congress approved the expeditious pursuit of utility privatization, and the federal tax on Contribution in Aid

of Construction needs to be waived. With congressional support, we anticipate awarding privatization contracts for the remainder of our selected utility systems by 2003.

At the start of Fiscal Year 2001, the Services owned 1,612 electric, water, wastewater, and natural gas systems worldwide (in addition to systems that are owned by other entities, such as host nations). The Services report that they have met the first DRID #49 milestone and have made go/no go decisions for all 1,612 systems, with 1,478 systems moving on to the formal RFP stage. A total of 124 systems have been determined to be uneconomical to privatize or are exempt because of security reasons. Fifteen systems have been privatized since DRID #49 was issued.

We face similar challenges in our telecommunications and information technology systems, critical elements in our framework for modern military operations and installations management. For several decades, the Defense Department has independently designed, developed, and purchased telecommunication systems at military installations, resulting in numerous independent systems that are now functionally deficient, likely to become technologically obsolete, often redundant, and, more importantly, costly. The Department can ill afford to own and operate outdated or under-capitalized or maintained systems and hope to "transform" itself for 21st-century operations

The Department's telecommunications systems must therefore be modernized and properly maintained to keep pace with increasing demands and fast-paced technological innovations, particularly in the private sector. A comprehensive telecommunications privatization initiative will thus equip the Defense Department with the access, interoperability, and security for information and communications by providing voice, video, and data services to all DoD personnel. Privatizing defense telecommunication systems will also allow consolidation of current separate telecommunication systems within the DoD and create a streamlined mix of public and DoD system investments that can be better managed and made more secure, more technologically updateable, and more effective than our present duplicative and fragmented systems. Privatization will also permit the incorporation of internet applications that will share critical information in real time and on an interactive basis. Finally, privatization will allow DoD to modify military installation infrastructure to support knowledge-exchange technologies such as knowledge management and e-business, positioning DoD to excel in the "Knowledge Age." Our goal is to privatize all appropriate telecommunication systems on military installations by 30 September 2005.

## Right Resources

**Money, people, and equipment are key to our success.** Our goal is to obtain and properly allocate the resources needed to achieve the right size and right quality of our facilities and installations. To do so, we must close the gap between current and future requirements and available resources. In a constrained budget environment, this does not only translate into more funding for installations and facilities. A related task is to find intelligent ways to reduce the resource requirements for facilities. Accordingly, our plan contains several initiatives directed at this goal. We will continue to seek the total funding necessary to ensure that all goals are met to support mission success and achieve our vision.

**To close the gap between current and future requirements and available resources, we must remain focused on our goals.**

The Department must pursue new and better business relationships with third parties, including private and quasi-public business and local communities, adopt revenue or savings-sharing mechanisms such as Energy Savings Performance Contracts (ESPCs), increase reliance on privatization, encourage rapid adoption of best business practices to re-engineer the business of defense, take advantage of cutting edge developments in the outside world, adopt new business approaches proposed by our own permanent civilian workforce, and find reliable ways to contract out services and the procurement of goods that can be better provided by others.

We must also continue to provide incentives for our installation commanders to explore vigorously ways in which the cost of doing business can be reduced while mission-effectiveness is enhanced. One such incentive used effectively in our demolition initiative is to allow innovators to retain funds "saved" that otherwise would be allocated to inefficient operations. If cost-saving initiatives free up resources to use for other critical needs, we are convinced that even more cost-effective initiatives will follow. We must not "disincentivize" our innovators by immediately taking all of their savings, while allowing their other installation requirements to go unmet.

## IMPROVED PLANNING GUIDANCE

In the recent past,installations and facilities were viewed as separable from the missions of the Department. Funding levels for facilities support were set independently from procurement and readiness programs,as though weapon systems could operate and training could continue in the absence of supporting facilities. But it is apparent to us that force structure exists on installations and that readiness is not possible without installations and facilities.

Program guidance to the military services in recent years has reflected the false separation of force and facilities. Facilities sustainment was such a low priority that program guidance dwindled to an ineffective "fund as much as possible." We need to change that—this guidance reflects the opposite of stewardship. Our planning guidance will be based on improved metrics, will normalize facilities support across the department so that all our soldiers, sailors, and airmen will feel appreciated, and will demand that our investments be preserved and properly utilized. We will work with the Office of Management and Budget to ensure these principles are reflected in future programs and budgets.

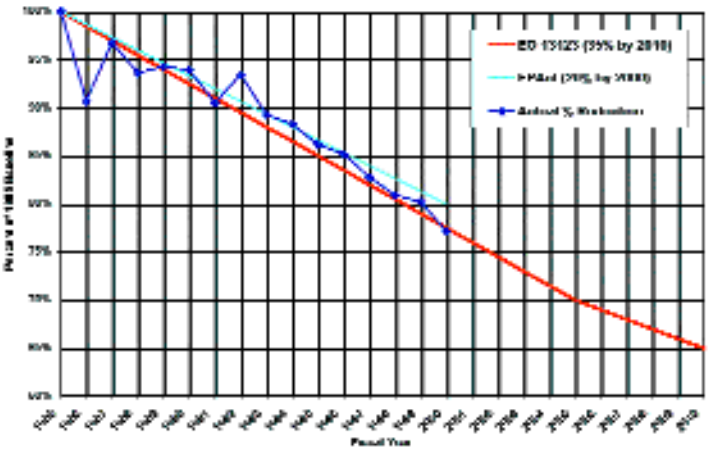


*Figure 9:* **DoD energy progress in buildings.**

## ENHANCED ENERGY MANAGEMENT

DoD installations spend over $2 billion per year on energy. Conserving energy and investing in energy reduction measures makes good business sense and frees up resources for sustaining our facilities and for higher DoD priority readiness and modernization.Defense is also the largest single energy consumer in the Nation, and a significant (and sometimes the largest) energy user in many local metropolitan areas. Recent dramatic fluctuations in the costs of energy significantly impact already constrained operating budgets, providing even greater incentives to conserve and seek ways to lower energy costs. Some of these initiatives include investments in cost-effective renewable energy sources or energy efficient construction designs, and aggregating bargaining power among regions and Services to get better energy deals.

Specific goals include a 35 percent reduction in building energy consumption by 2010 compared to 1985 consumption (on a BTU/square-foot basis.) DoD had already reduced its energy consumption in buildings by 22.9 percent as of 2000, slightly more than the 22.5 percent required at this point. Significantly greater savings are possible, as shown in *Figure 9*.

The Department has taken a more market-based, cost-savings approach to energy conservation and efficiency in partnership with the private sector, with encouraging results. Early indications show that investing in energy conser vation provides a significant return on investment, and frees scarce resources for higher core mission and troop/base family Quality of Life requirements;funds that would otherwise be in competition for upgrading antiquated utility and energy systems. Key programs include:

- **Energy Conservation Investment Program (ECIP):** This is a project-oriented, Defense-wide MILCON account with $50 million programmed annually through the FYDP. It is the only direct Defense Department investment in energy conservation.
- **Utility Energy Services Contracts (UESCs):** These are 10-year contracts with public utilities to install energy-savings measures financed in part, or wholly by the savings produced by the project.
- **Energy Savings Performance Contracts (ESPCs):** Energy Savings Performance Contracts have terms of up to 25-years and contain contractor-guaranteed cost savings used to repay the contractor's investment in the energy savings equipment installed.

## COMPETITIVE SOURCING

The Nation's operating forces have shown remarkable flexibility, adaptability, innovation, and ingenuity in adjusting to the changed and changing international security environment. Continued success in transforming the Armed Services to achieve what *Joint Vision 2020* calls 21st-century "full-spectrum dominance"—forces that are persuasive in peace, decisive in war, and preeminent in any form of conflict —will require our support infrastructure to become as agile, efficient, and effective as our war-fighters.

When there is no impact on readiness and combat capability, competitive sourcing of installation services and maintenance and repair activities offers the potential for improved performance, increased responsiveness to customers, better access to new technology, and lower costs. In sum, it enables the Department to make the best use of available resources to meet national security objectives.

Recognizing these benefits, we have already competitively out-sourced significant portions of installation services and facilities maintenance and repair activities; but more savings are possible. The 1997 Defense Reform Initiative directed the Department to streamline its infrastructure further by using the OMB Circular A-76 process to conduct public-private competitions for commercial activities. In development of the Fiscal Year 2000 President's Budget, approximately $11.2 billion in funding for readiness and modernization was made available through savings projected from these efforts. Those funds depend upon our successful implementation of competitive and strategic-sourcing plans.

## Right Tools and Metrics

**Business as usual will not suffice.** The Nation's operating forces are embracing leading-edge technologies, advanced platforms, and novel operational concepts to achieve what has been described as the Revolution in Military Affairs, or "RMA." Concurrent with changing force-support requirements for the RMA is our similarly far-reaching Revolution in Business Affairs—embracing innovative ways that support functions are being provided in the commercial sectors of the global economy. Although we have already incorporated far-reaching commercial developments into our way of doing America's defense "business," more can be accomplished. Indeed, how we measure and track our progress will influence the type of programs we use to meet our long-term objectives.

Our program to employ best business practices in the manner in which we manage our installations and facilities has implications for the "tools"that we have in our management "toolbox."The management information systems, databases, models, and performance-assessment metrics of even the recent past are not adequate for today's needs, much less tomorrow's. We must have the best information on which to base our decisions, and to assess our performance, if other important goals and our installations and facilities vision are to be realized. Our experience has shown us that we get what we measure, and if we measure the right things correctly we can get the results we need.

We are therefore putting in place the tools and metrics that will enable us to make correct assessments of the current and projected future condition of our physical plant, and directly linking them to our Installations Readiness Reporting System. We are continuing to implement activity-based costing principles and performance-based metrics, to ensure that we measure what truly must be measured for informed decision-making. The several initiatives that support the Right Tools and Metrics goal are discussed below.

**Continuous improvement to DoD facilities requires a day-to-day commitment.**

### FACILITIES ASSESSMENT DATABASE

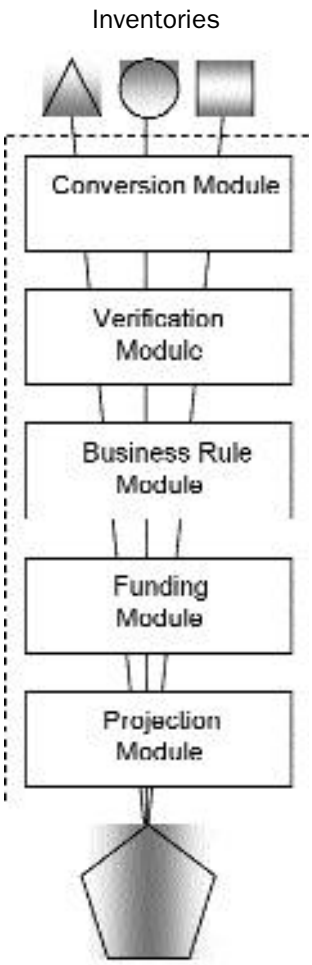
To conduct in-depth analyses of the Department's installation infrastructure, numerous organizations within the Defense Department routinely need detailed information that could best be provided by one consolidated database that includes real property data from all the military services. The Facilities Assessment Database (FAD),an amalgamation of the Services' real property databases, has been developed for use as an analytical tool to meet our common needs. Begun in 1997, the FAD contains more 13 million records covering 12 fiscal years (1989-2000).

We developed the FAD as a "no-frills" analytic tool to provide detailed real property inventory data.Understanding how important it has proven to be, we are expanding the FAD to include personnel data, weapon systems inventory, and costs of sustainment, restoration and modernazation activities and base operating support. This database now provides access to data necessary to assess and validate the Service components' planning, programming, and budgeting input, as well as facilitate force and infrastructure analyses to support senior leadership decisions. And, the FAD has become the source database for other Department databases and management tools, particularly the Facilities Sustainment Model (FSM).

### MODERN REAL PROPERTY MANAGEMENT INFORMATION SYSTEM

The Department of Defense needs accurate, reliable, and timely information to underpin sound

*Figure 10:*
**Current Real Property Management System.**




budget and facility investment decisions. However, each military department maintains its own unique real property inventory—and the systems and data content are not compatible in many ways. Prior to 1997, Department-wide information was typically gathered by data calls to each Service—but the results often lacked accuracy, completeness, and timeliness. Beginning in 1997, we have made good progress in creating a consolidated inventory, but more can be done. Because of embedded incompatibilities in structure and data, the current reporting process is cumbersome, featuring conversions, verifications, business rules, and separate forecasts to create a usable system (see Figure 10).

Recognizing the need for a uniform, automated real property inventory, we are rewriting our policy guidance on inventorying real property, and we expect to implement the changes beginning in January 2002. We expect this guidance to standardize definitions and data elements. Beyond this initial step, we have completed a comprehensive study, *Assessment of DoD Real Property Information Systems*, and are beginning a more far-reaching effort to transform and extend the real property information systems,bringing more capacity and graphical information to bear on future decision making.

## FACILITIES SUSTAINMENT MODEL

The Facilities Sustainment Model (FSM) is a new, comprehensive, and extremely powerful management tool.Developed by a cross-Department working group, the model generates an annual funding requirement that will sustain a facilities inventory throughout a normal life cycle. FSM is grounded in standard facility-specific cost factors, is tied to the specific facilities inventory that must be sustained (captured from FAD), and is applicable throughout the Defense Department.The current version of the DoD Facilities Cost Factor Handbook links commercially based benchmarks, reflective of the DoD physical plant,as the basis for determining these costs.The model then computes a unique sustainment cost for each type of facility and accounts for variable area costs.

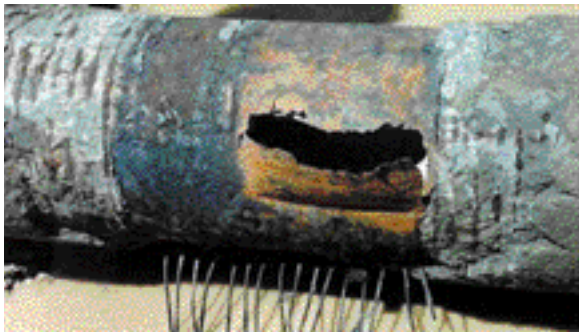
With the development of FSM as a viable costing model, the Services have modified their previously unique data systems to capture similar facilities maintenance and repair accounting information. Through the efforts of the FSM Working Group and the Defense Facilities Strategic Plan Working Group, programs have been developed to capture critical Facilities Sustainment and Facilities Restoration and Modernization data. The intent of the Facilities Sustainment program is to track the cost of keeping current inventory in good working order. The Facilities Restoration and Modernization program focuses on the costs required to restore degraded or damaged facilities to a functional status or to remodel/modernize facilities to meet changed mission requirements or to meet new standards.

## FACILITIES RECAPITALIZATION METRIC AND FACILITIES AGING MODEL

To track progress in our restoration and modernization programs, we have developed a Facilities Recapitalization Metric (FRM), which relates planned investments to expected facility service lives. Our new metric is more precise than earlier variants because it:

- **Considers the combined effect of construction and other resources on the physical plant**
- **Limits the "recapitalizable" asset base to just those assets that we need to keep**
- **Excludes single use facilities (such as a strategic missile silo)**
- **Eliminates assets that likely will be recapitalized by other countries**

The FRM is a high level summary tool and is supplemented by our Facilities Aging Model (FAM). The FAM is a more detailed tool that enables us to assess the impact of planned facility actions on individual groups of facilities,which allows for targeted investments. Both the FRM and FAM require certain inputs that are valuable products in their own right—for example, a standard taxonomy of investments that contribute to facility recapitalization as well as "target replacement life" factors for each category of facilities. Both these tools, which never existed in the Department's "toolbox" before, will greatly assist critical decisions.



**Decaying systems undermine our overall readiness.**

## STANDARDIZE FACILITY CATEGORIES

These facilities initiatives (FAD, FSM, and FAM) are important and highly effective new management tools. One of our greatest management challenges in their development has been the fact that the Department and the various Armed Services have had different ways to categorize the same types of facilities. Facilities having similar or identical functions often were assigned to different categories and occasionally were even assigned to different classes by the individual Services. It was a virtual "Tower of Babel" for installations and facilities.

To remedy this, a new common four-digit classification system was designed to give the Department a more accurate look at its physical plant.The new categories are called Facility Analysis Categories (FACs), and each FAC comprises facilities of the same function, uses a common unit of measure, a common construction-cost factor, and a common sustainment cost factor. We have institutionalized this initiative across the Services, evidenced by the use of standardized FACs in the first operational version of the FSM, and are in the process of incorporating a FACs policy in a Defense Department instruction.

## READINESS REPORT

One of the most important innovations that we have put in place, and which borrows from these other "toolbox"innovations,is the inclusion of installations and facilities in the Department of Defense Readiness Reporting System. Our war-fighting commanders and their supporting operational and administrative commands have, for years, been reporting on the readiness of their units—Air Force wings, Army divisions,Navy warships,and Marine Corps expeditionary units. Rated from C-1, fully capable of carrying out their required missions, to C-4, incapable of carrying out their required mission,the Readiness Reporting System has provided the National Command Authorities a macro-level assessment and "sit-rep" on the condition of America's military forces.

Until recently, however, no such reporting system was in place for our defense installations and facilities. In Fiscal Year 2000, for the first time the Defense Department reported to Congress on Installations Readiness as an integral element of the Defense Readiness Reporting System. Major commanders rate each facility class in their command, using the standard C-1 to C-4 readiness definitions, to provide a top-level assessment of the condition of our installations and facilities and the effect that facility condition has on military readiness.

**"We are mortgaging the infrastructure aspect of our force readiness to stem the decline in operational readiness. Over the past six years we have averaged an investment in infrastructure at a 250 year replacement rate. Industry standard is 50 years. We cannot continue this underinvestment or it will have a compounding effect on our near term and long term readiness."**

**General Michael D. Ryan, Chief of Staff, USAF – Readiness Hearing, September 2000**

# Looking Ahead

Defense installations and facilities are the framework of and the "enablers" for our military forces to carry out worldwide operations in support of the *National Security Strategy* and the *National Military Strategy*. Absent modern, capable, and well-situated installations and facilities at home and abroad, the U.S. Armed Forces would be a "Potempkin Village" military. The readiness of our military and the Quality of Service of our people are directly related to the health of our defense installations and facilities worldwide.

Our first Defense Installations Posture Statement, FY2001 provides the Administration, the Congress, and the American people with the basis for making difficult decisions regarding America's Defense installations and facilities. We have outlined our vision—to ensure installations and facilities that are available when and where needed, with the capabilities necessary to support completely current and future military requirements. Our vision shapes our mission—to provide, operate, and maintain defense installations and facilities in the most cost-effective manner—and it serves as a guidepost for our plans, programs, and operations. We have outlined a 20-year Defense Facilities Strategic Plan that includes numerous initiatives to achieve critical goals for Right Size and Place, Right Quality, Right Resources, and Right Tools and Metrics. Subsequent annual editions of the Defense Installations Posture Statement will provide "report cards" on how well the Defense Department is doing in achieving our vision and goals. We must stay the course that we have laid out for ourselves, our people, and the Nation.

In the decade since the fall of the Berlin Wall, we aggressively re-shaped our force structure and tried to live within a budget reflecting the desire to "stand-down." Unfortunately, we let that pendulum swing too far. For much of the 1990s, we underfunded and over-used our military forces and we are now seeing the toll of this abuse. It is time to arrest that deterioration and prepare ourselves to face the new and different threats of the future. As President Bush outlined his vision for revitalization of Defense forces in his *Blueprint*, our focus must be on the security of future generations of Americans. The Secretary of Defense directed a strategy review to best guide future decisions addressing selected shortfalls. We have sustained, restored, modernized and replaced some of this critical element of America's defense infrastructure. We have also closed, disposed of, or demolished those elements that could never meet our needs, no matter how much money we spent, and were a drain on our scarce resources. But, much more should and can be done. America's security, today and in the future, depends upon its Defense installations and facilities; they are the "glue" that holds our forces together and preserves our people's Quality of Service to the Nation. In short, military readiness begins at home.

# Installations Policy Board

## Defense Facilities Strategic Plan Working Group

**August 2001**